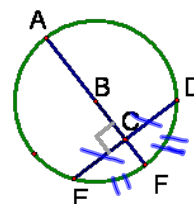
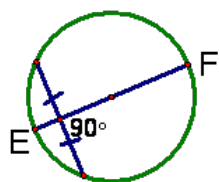


11.4 Arcs and Chords

Theorem 11.4-If a diameter of a circle is perpendicular to a chord, then the diameter bisects the chord and its arc.

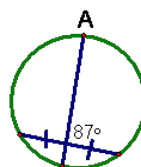


Theorem 11.5-If one chord is a perpendicular bisector of another chord, then the first chord is the diameter.

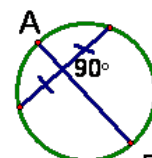


\overline{EF} is the diameter

Is \overline{AB} a diameter?

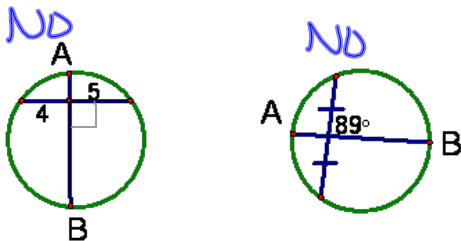


No



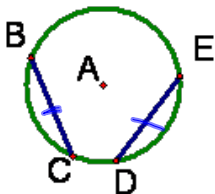
yes

Is \overline{AB} a diameter?

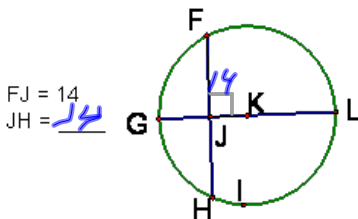


Theorem 11.6-in the same circle, or congruent circles:
• Two chords are congruent if their minor arcs are congruent.
• Two minor arcs are congruent, if their chords are congruent.

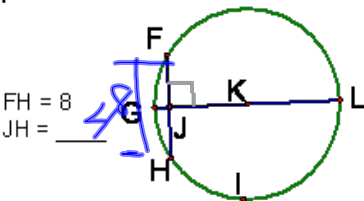
If $BC = DE$,
then $\widehat{BC} = \widehat{ED}$



Examples:

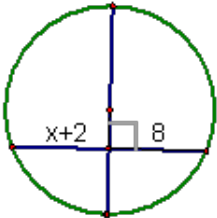


Examples:



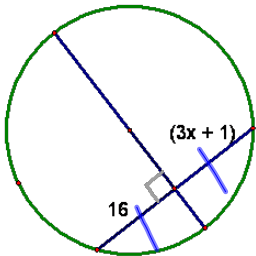
Examples:

$x = \underline{6}$



$$\begin{aligned} x+2 &= 8 \\ x &= 6 \end{aligned}$$

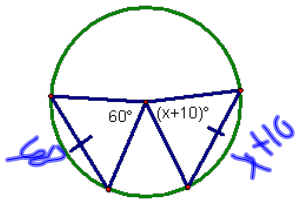
$x = \underline{5}$



$$\begin{aligned} 3x+1 &= 16 \\ 3x &= 15 \\ x &= 5 \end{aligned}$$

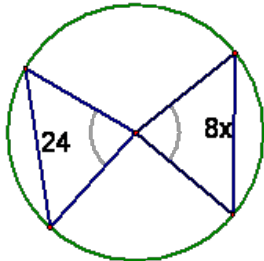
Examples:

$x = \underline{50}$



Examples:

$x = \underline{3}$



$$8x = 24$$

HW

p610-611

3-11, 15-18